

CLAIMS

We claim:

1. A method comprising:

receiving a data access query that combines a structured query language (SQL) statement with output related characteristics of an output data chart, the data access query being provided by a first user; and

building the output data chart for a second user using the data access query.
2. The method of claim 1 wherein the first user is familiar with a data model of a database being queried and the second user is not familiar with the data model of the database being queried.
3. The method of claim 1 wherein the output data chart is one selected from the group consisting of a graph and a grid.
4. The method of claim 1 wherein the output related characteristics are selected from the group consisting of one or more dimension elements of the output data chart, one or more properties of each dimension element, and one or more metrics to be included in the output data chart.
5. The method of claim 1 wherein the data access query provides associations between database elements contained in the data access query with corresponding output related characteristics.

6. The method of claim 1 further comprising providing an access query user interface to assist the first user.

7. The method of claim 1 further comprising:
extracting an SQL query from the data access query; and
executing the SQL query to check whether the SQL query has a correct syntax.

8. The method of claim 1 wherein building an output data chart further comprises:
determining, based on user input, that the output data chart is a grid;
determining whether the grid is one-dimensional or multi-dimensional based on the data access query; and
if the grid is one-dimensional, identifying a structure of the grid based on the data access query.

9. The method of claim 8 further comprising:
determining that the grid is multi-dimensional;
creating a list of dimension elements of the grid using the data access query; and
designating one dimension element from the list for a Y-axis of the grid based on user selection from the list of dimension elements.

10. The method of claim 1 wherein building an output data chart further comprises:

determining, based on user input, that the output data chart is a graph;
determining a number of dimensions and a number of metrics within the graph
based on the data access query;
identifying a list of available graph types based on the number of dimensions and
the number of metrics; and
determining a graph type to be used based on user selection from the list of
available graph types.

11. The method of claim 10 further comprising:
determining that the number of metrics exceeds an allowable number of metrics
for the selected graph type;
creating a list of metrics using the data access query; and
identifying metrics to be used for the graph based on user selection from the list of
metrics.

12. The method of claim 10 further comprising:
if the graph has more than one dimension, creating a list of dimension elements
for the graph using the data access query; and
identifying a primary dimension for the graph based on user selection from the list
of dimension elements.

13. The method of claim 1 further comprising making the output data chart
available for integration into a personalized web page of the second user.

14. The method of claim 1 further comprising restricting access to the output data chart to employees of a certain business division.

15. The method of claim 1 further comprising:
upon receiving the data access query, identifying a plurality of data elements in one or more database tables that are to be accessed according to the data access query; and
creating a set of preliminary filters for the output data chart using the plurality of data elements in the one or more database tables.

16. The method of claim 15 further comprising:
requesting the second user to specify parameters for one or more preliminary filters within the set of preliminary filters to define how content of the output data chart is to be restricted;
creating final filters using the set of preliminary filters and specified parameters;
and
adding the final filters to a WHERE clause of an SQL query extracted from the data access query.

17. A system comprising:
a query engine to receive a data access query that combines a structured query language (SQL) statement with output related characteristics of an output data chart, the data access query being provided by a first user; and
a data chart engine to build the output data chart for a second user using the data access query.

18. The system of claim 17 wherein the first user is familiar with a data model of a database being queried and the second user is not familiar with the data model of the database being queried.

19. The system of claim 17 wherein the output data chart is one selected from the group consisting of a graph and a grid.

20. The system of claim 17 wherein the output related characteristics are selected from the group consisting of one or more dimension elements of the output data chart, one or more properties of each dimension element, and one or more metrics to be included in the output data chart.

21. The system of claim 17 wherein the data access query provides associations between database elements contained in the data access query with corresponding output related characteristics.

22. The system of claim 17 wherein the query engine is further to extract an SQL query from the data access query, and to execute the SQL query to check whether the SQL query has a correct syntax.

23. The system of claim 17 wherein the data chart engine is to build an output data chart by determining, based on user input, that the output data chart is a grid, determining whether the grid is one-dimensional or multi-dimensional based on the data

access query, and identifying a structure of the grid based on the data access query if the grid is one-dimensional.

24. The system of claim 17 wherein the data chart engine is to build an output data chart by determining, based on user input, that the output data chart is a graph, determining a number of dimensions and a number of metrics within the graph based on the data access query, identifying a list of available graph types based on the number of dimensions and the number of metrics, and determining a graph type to be used based on user selection from the list of available graph types.

25. An apparatus comprising:
means for receiving a data access query that combines a structured query language (SQL) statement with output related characteristics of an output data chart, the data access query being provided by a first user; and
means for building the output data chart for a second user using the data access query.

26. The apparatus of claim 25 wherein the first user is familiar with a data model of a database being queried and the second user is not familiar with the data model of the database being queried.

27. The apparatus of claim 25 wherein the output data chart is one selected from the group consisting of a graph and a grid.

28. The apparatus of claim 25 wherein the output related characteristics are selected from the group consisting of one or more dimension elements of the output data chart, one or more properties of each dimension element, and one or more metrics to be included in the output data chart.

29. The apparatus of claim 25 wherein the data access query provides associations between database elements contained in the data access query with corresponding output related characteristics.

30. A computer readable medium comprising executable instructions which when executed on a processing system cause said processing system to perform a method comprising:

receiving a data access query that combines a structured query language (SQL) statement with output related characteristics of an output data chart, the data access query being provided by a first user; and

building the output data chart for a second user using the data access query.

31. The computer readable medium of claim 30 wherein the first user is familiar with a data model of a database being queried and the second user is not familiar with the data model of the database being queried.

32. The computer readable medium of claim 30 wherein the output data chart is one selected from the group consisting of a graph and a grid.